COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Virginia Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Amoco Oil Company
9601 Colonial Avenue
Fairfax, Virginia
Permit No. NVRO-70220

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Amoco Oil Company has applied for a Title V Operating Permit for its Fairfax Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer:_____ Date:_____

Air Permit Manager:_____ Date:_____

Regional Permit Manager:_____ Date:_____

FACILITY INFORMATION

Permittee:

Amoco Oil Company
Fairfax Terminal
9601 Colonial Avenue
Fairfax, Virginia 22031

Responsible Official:

Mark Cleveland
Terminal Manager
9601 Colonial avenue
Fairfax, Virginia 22031

AIRS ID No. 51-059-0061

SOURCE DESCRIPTION

SIC Code: 5171

The facility is a petroleum liquids storage and distribution facility. The terminal structures and equipment include six (6) vertical fixed roof tanks. Five tanks are equipped with internal floating roofs with liquid mounted primary and rim mounted secondary seals. There are several small fuel additive tanks. The facility has a loading rack which has seven (7) lanes, six (6) are operational. One bay is dedicated to distillates, and the other five (5) are for distillates and conventional and reformulated gasoline. There are two vapor control units. One is a vapor recovery unit (VRU) which is a carbon adsorption/absorption vapor recovery type. It is the primary control unit. The second is a vapor combustion unit (VCU)(backup). The vapor control units are electrically interlocked to operate when tanker trucks loading pumps are activated. If the VRU system pressure is insufficient due to electrical failure or other causes, the VCU is automatically actuated. If the VCU operating conditions are not established, the truck loading pumps are automatically shut down.

There are buildings which house offices, maintenance facilities, and a garage building. Refined products are received at the site by pipeline. Fuel additives are received by tanker truck. The loading rack is configured to permit loading six (6) tanker trucks simultaneously, with either gasoline or distillates.

The facility is a Title V major source of volatile organic compounds (VOC). It was previously permitted under a Minor New Source Review (NSR) Permit, issued November 13, 1997, which remains in force.

COMPLIANCE STATUS

The facility is inspected twice a year, and it has been and continues to be in compliance with 9 VAC 5-40 Article 37 and 40 CFR 60, Subpart Ka, and Subpart XX.

SIGNIFICANT EMISSION UNITS AND CONTROLS

Emission Unit ID	Emission Unit Description	Size/Rated Capacity (approximate-gallons)	Control Description	Pollutant Controlled	Applicability
Tank-1	Storage Tank	3,060,000	Internal Floating Roof	Gasoline – volatile organic compounds (VOC)	Rule 4-37
Tank-2	Storage Tank	2,498,000	Internal Floating Roof	Gasoline – VOC	Rule 4-37
Tank-4	Storage Tank	4,428,000	Internal Floating Roof	Gasoline – VOC	Rule 4-37
Tank-5	Storage Tank	1,441,000	Internal Floating Roof	Gasoline – VOC	Rule 4-37
Tank-6	Storage Tank	3,018,000	Internal Floating Roof	Gasoline – VOC	Rule 4-37 and Subpart K
LR-VRU-VCU	Loading Rack-Vapor Recovery Unit	144,000 gallons/hour	Vapor Recovery Vapor Combustion	Gasoline – VOC	New Source Performance Standard (NSPS)

Note: The requirements of Rule 4-37 are more stringent than 40 CFR 60, Subpart K.

EMISSION UNIT APPLICABLE REQUIREMENTS

This facility is regulated by a New Source Permit to Modify and Operate which was issued November 13, 1997. Limits were set on the throughput of gasoline which are federally enforceable and which would limit Hazardous Air Pollutants (HAPs) emissions to less than ten (10) tons per year (ton/yr) for a single HAP and less than 25 ton/yr for total HAPs. The vapor control unit was installed on site in 1988, and it was replaced in 1995.

EMISSIONS INVENTORY

A copy of the annual emissions update for 1998 is attached. Emissions are summarized as follows:

Actual VOC Emissions[1.]		
Description	**Annual – tons/yr**	**Method**
Tank Emissions – Gasoline	16.80	AP-42 (Chapter 7.1)
Loading Rack Stack	3.86	AP-42
Loading Rack Fugitives	0.16	AP-42 CTG
Equipment Fugitives	0.40	AP-42
Distillate Loading Rack [2.]	0.18	-
Truck Loading Fugitives	9.00	AP-42 (EPA TANKS Model)
Total[3.]	30.24	-

[1.] Based on a throughput of 253,949,850 gallons of gasoline. VOC emissions include HAPs.
[2.] Distillate storage and processing are unregulated.
[3.] All emissions listed except the vapor control units are fugitive emissions.

Facility Hazardous Air Pollutant Emissions (tons/yr)

Benzene	**Ethyl Benzene**	**n-Hexane**	**Methyl TertiaryButyl Ether (MTBE)**	**Naphthalene**	**Toluene**	**Isooctane**	**Xylenes o-,m-,p-**	**Total - Tons/y.**
0.03	0.01	0.20	1.63	0.00	0.09	0.10	0.04	2.1

Note: These emissions are included in the VOC totals.

Limitations

The following limitations are SIP requirements under 9 VAC Article 37, 40 CFR 60 Subpart K and 40 CFR 60, Subpart XX:

Emissions Unit - Tanks

Emissions to the atmosphere from the fixed roof gasoline tanks shall be controlled by internal

floating roofs resting on the surface of the liquid contents and equipped with closure seals to close the space between the floating roof edge and the tank shell. Tanks storing volatile organic compounds (VOC) shall achieve a minimum of ninety percent (90%) reduction by weight in emissions. The storage of petroleum products with a true vapor pressure greater than or equal to one and one-half pounds per square inch absolute (1.5 psia) shall achieve this reduction by installing an internal floating roof (cover) equipped with closure seals. (9 VAC 5-40-5230.A.1.a)

All gasoline storage tanks, Tank-1, Tank-2, Tank-4, Tank-5, and Tank-6, located at this facility conform with the above requirements. These requirements are specified in 9 VAC 5-40-5230.

Limitation on VOC emissions from the five (5) gasoline storage tanks, is listed as 13.54 tons /yr. This is stated in Condition 7 of the permit dated November 13, 1997, and the emissions were, in fact, calculated on the basis of 1,000,000,000 gallon of annual throughput for the tanks.

Fixed roof tanks storing petroleum liquids with a vapor pressure less than 1.5 psia under actual storage conditions or, in the case of filling or processing, under actual filling conditions, which is the case with Tank-3, are exempt from Rule 4-37. (9 VAC 5-40-5200. C)

Limitations placed on this facility regarding distillates are for emission inventory purposes only.

Note: Previous issues of this permit in draft form have listed Tank 6 as being subject to 40 CFR 60, Subpart Ka. This was done in error. Tank 6 was, in fact, constructed early in 1978, and it is subject to Subpart K.

EMISSION UNIT - LOADING RACK AND VAPOR CONTROL UNITS

Limitations for loading rack throughput of gasoline were reiterated from the New Source permit to 700,000,000 gallons per year at Condition 6 of the permit dated November 13, 1997.

The vapor control unit, with the voluntary 10 milligrams per liter (mg/l) limitation that they accepted with their New Source permit, achieves more than a 90% reduction in emissions through the vapor control units.
(9 VAC 5-80-100.A)

There is no limitation listed for criteria pollutants in the New Source permit of November 13, 1997. The vapor combustion unit has a limit listed for total organic compounds/volatile organic compounds (TOCs/VOCs) of ten (10) mg/l that is the same for the vapor recovery unit. Limits of criteria pollutants through the vapor combustion unit stated in the Title V operating permit are below five (5) tons per year, and are considered essentially insignificant.

40 CFR 60, Subpart XX Requirements

Total organic compound (TOC) emissions from the vapor recovery unit shall not exceed 35 mg/l

of gasoline loaded. This source streamlined limits with the 10 mg/l value which appears in their 1997 permit. The only other organic compounds normally expected in the discharge of the vapor control units would be methane or ethane. Both of these compounds are excluded by 40 CFR 60.503(c)(ii)(6). The limit is found at Condition IV.A.2.

Each calendar month the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. A method incorporating sight sound or smell is acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within fifteen (15) calendar days after it is detected. This condition according to 40 CFR 60.502(j) is found at Condition IV.B.3.

Fugitive emissions from the loading rack may be quantified. These emissions (TOC) have been calculated from AP-42 data as 13 mg/l, loaded. However, data from the Control Techniques Guideline (CTG) indicate that the emissions are more nearly eight (8) mg/l. The eight (8) mg/l factor, determined by Environmental Protection Agency (EPA) 450/2-78-051 is used in the permit both for establishing an emission inventory and for fee purposes. This requirement appears in the Title V permit at Condition IV.A.2.

A tanker trucker must present documentation, manually, electronically or another method acceptable to the Department of Environmental Quality (DEQ), of the vapor tightness of the tank prior to loading according to 40 CFR 60.502(e)(2). This is found at Condition V.A.1. (a).

Maximum Achievable Control Technology (MACT) APPLICABILITY

A Gasoline Distribution MACT notification is required for an affected facility, that is, one with a potential to exceed the ten (10) tons/yr for any single HAP or twenty-five (25) tons for total HAP emissions. This source elected to obtain a New Source permit with federally enforceable limits before December 1997 which allows them to be exempt from 40 CFR part 63 Subpart R. They have further opted to conform with the conditions appearing in 40 CFR 63.420(a)(1)(c) which defines the parameters for using the applicability formula to retain *exempt* status. This is found at Condition VI.A.1.

Monitoring

Monitoring of tanks is found in the Title V permit at Condition III.B. The emissions are estimated from records of each product stored, average storage temperature and the true vapor pressure of the stored product found at Condition III.C.2. These records are fairly accurate, but they are approximate, because some fuel is received from the pipeline and returned directly to the pipeline. This causes a discrepancy in the throughput of the tanks and the throughput at the loading rack. These records of the storage conditions and type of product stored are required by 9 VAC 5-40-5220.A.4.c. Tank 6 is required to record these items by 40 CFR 60.115(a). There may be an alternative method for monitoring used, provided prior approval is secured from both the EPA and DEQ.

Monitoring is required for TOC and VOC emissions from the VCU as described in Condition IV.B.1-3. The baseline for this will be established during the certification test of the monitoring method chosen. If a malfunction should occur, the expected response time to inspect and isolate a breakthrough in the carbon beds or other malfunction is from one (1) to twenty-four (24) hours. The expected time required to develop and implement a solution is from one (1) to seven (7) days.
Additionally the Loading Rack and VRU are monitored by inspection for vapor/liquid leaks each calendar month at Condition IV.B.3.

The monthly site inspection of all pumps, fittings, etc., at Condition IV.B.3, assures that fugitive emissions will be minimized.

Recordkeeping and Reporting

All records of monitoring maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

(1) The date, place as defined in the permit and the time of sampling or measurements.

(2) The dates analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical methods used.

(5) Results of such analyses.

(6) Operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

Records of all monitoring data and supporting information shall be retained for at least five years from the date the information was obtained unless a lesser date is indicated (9 VAC 5-80-110.F.1.b). Support information includes all calibration and maintenance records and all other data required by the permit. This data shall include any deviations from permit requirements. The term “deviation includes any exceedence of permit condition or any excursion from control performance indicator documented through periodic or compliance assurance monitoring. Results of this data contained in any applicable requirement shall be submitted to the Air Compliance Manager, Northern Virginia Regional Office, with a copy to:

U.S. EPA Region III
Air Protection Division (3AP00)

ATTN: NSPS-40 CFR Part 60 Subpart XX Coordinator
1650 Arch Street
Philadelphia, PA 19103-2029

Results shall be submitted no later than March 1 and September 1 of each calendar year. The report must be signed by a responsible official consistent with 9 VAV 5-80-80 G, and shall include:

(1) The time period covered by the report - the time periods to be addressed are January 1 to June 30 and July 1 to December 31 (9 VAC 5-80-110 F).

(2) The permit requires periodic inspections of the internal floating roof, the associated seals and the recordkeeping and reporting for the inspections. The New Source permit requires that all internal floating roof tanks are to be inspected and records kept and reports are to be made for all tanks that store gasoline. The tanks are also subject to 9 VAC 5-40-5200. Under the present operational mode tanks storing product with vapor pressures less than 1.5 psi are exempt from Rule 4-37.

(3) In 1988 Amoco Oil Company ceased using the vapor control unit shared with three other companies. A new vapor control unit was installed. This unit was replaced early in 1995. The vapor recovery unit was stack tested on September 21, 1995. The vapor combustion system was tested the next day. Both units had emissions below the ten (10) mg/l level.(40 CFR 60, Subpart XX limit is thirty-five (35) mg/l)).

(4) 40 CFR 60, Subpart XX also requires annual tanker truck certification for vapor tightness that is addressed at Part V of the Title V permit.

Testing

Testing may be required at any time at the request of DEQ. Testing should be performed after a major malfunction or breakdown. Examples of these conditions are burnthrough of the carbon beds, malfunction of the refrigeration unit or a malfunction of the vapor combustion unit, which last for more than one day. The permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC	EPA Methods 24, 24a

Pollutant	Test Method (40 CFR Part 60, Appendix A)
NO_x	EPA Method 7 or 7E
SO_2	EPA Method 6 or 6C
CO	EPA Method 10
PM/PM_{10}	EPA Methods 5, 17
Visible Emission	EPA Method 9

(40 CFR 60.502 (e)(3-5); 60.502 (f-i); 60.505 (a), 9 VAC 5-20-121. A. 2, and 9 VAC 5-80-110.B.1)

The permit does require initial source stack) testing. In the case of the monitoring device(s) for the vapor control units, it does require initial testing. It also requires compliance testing after major malfunctions of either vapor control system. A table of test methods has been included in the permit when testing is performed. The DEQ and EPA have authority to require testing at any time, if necessary to determine compliance with an emission limit or standard.

ANNUAL COMPLIANCE CERTIFICATION

Exclusive of any reporting required to assure compliance with the terms of this permit or as a part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year, a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to § 114(a)(3) and § 504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G and shall include:

(1) The time period included in the certification - The time period to be addressed is January 1 to December 31.

(2) A description of the means for assessing or monitoring the compliance of the source with its emissions limitations, standards and work practices.

(3) The identification of each term or condition of the permit that is the basis of the certification.

(4) The compliance status.

(5) Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-conformance.

(6) Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

(7) Such other facts as the permit may require to determine the compliance status of the source.

The certification as described shall be submitted to the Air Compliance Manager, Northern Virginia Regional Office, and a copy shall be sent to:

U. S. EPA Region III
Clean Air Act Title V Compliance Certification (3AP00)
1650 Arch Street
Philadelphia, PA 19103-2029

This requirement is addressed at Condition VIII.D.
(9 VAC 5-80-110 K.5)

STREAMLINED REQUIREMENTS

The Vapor control units with an emission limit of ten (10) mg/l is more stringent than limits set by 40 CFR 60 Subpart XX and limits for a NSR permit.

Monthly liquid/vapor leak inspections also reduce the occasion for spills, malfunctions or any other cause for additional emissions.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset, within one business day.

STATE ONLY APPLICABLE REQUIREMENTS

The following regulation has specific requirements only enforceable by the state. The applicant has identified it as applicable:

Existing Stationary Sources, Emission Standards for Odor Rule 4-2. (9 VAC 5-40-130)

FUTURE APPLICABLE REQUIREMENTS

There are no future applicable requirements to address at this time.

COMPLIANCE PLAN

There is no requirement for a Compliance Plan.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

INAPPLICABLE REQUIREMENTS (from the permit)

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit.

Citation	Title of Citation	Description of applicability
9 VAC 5-40-3410 through 3550	Emission Standards for VOC Storage and Transfer Operations	Since the provisions under petroleum liquids storage or transfer apply, and support tanks are less than 40,000 gallons capacity Article 25 does not apply (9 VAC 5-40-3410. C)
40 CFR 63, Subpart R	National Emission Standard for Gasoline Distribution - Stage I	Potential to emit HAPs has been limited to less than 10 tpy for a single HAP and 25 tpy total HAPs by limiting the total throughput of gasoline. This limit appears in their New Source Permit dated November 13, 1997. The facility is exempt from Subpart R requirements, but it will continue to maintain the exempt status by conforming with the exemption parameters stated in 40 CFR 63.420(a)(1)(c)
40 CFR 68	Accidental Release Prevention Requirements: Section 112 (r)	Petroleum Liquids (gasoline, diesel fuel, jet fuel, etc.) Are not subject to this rule

INSIGNIFICANT EMISSION UNITS

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	RatedCapacity (5-80-720 C)
-	Groundwater Remediation Unit	9 VAC 5-80-720	VOC	< 0.5 tpy
Tank-3 LR-1	Distillate Storage and Transfer	9 VAC 5-40-5200.C	VOC	-
-	Additive Tanks	9 VAC 5-40-5200.C	VOC	-
-	Oil /Water Separator Tanks	9 VAC 5-40-5200.C	VOC	-

There are no other insignificant emissions sources at this facility except those specifically addressed in 9 VAC 5-80-720. These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

PUBLIC PARTICIPATION

The proposed permit was place on public notice in the Washington Times on June 15, 2000.